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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,385	12/21/2001	Jeffrey E. McAninch		1135

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EXAMINER

ROSENBERGER, RICHARD A

ART UNIT PAPER NUMBER

2877

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/027,385

Applicant(s)

MCANINCH, JEFFREY E.

Examiner

Richard A Rosenberger

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-55 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 2877

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nikoonahad et al (US 6,628,397).

The reference shows an arrangement for use in an optical metrology instrument where light is detected and analyzed after reflecting from a measurement position on a sample (202) comprising: an optical system (21), 216, 218) connected to a support (clearly the system must be supported by some means), the support including a faceplate (lens 210 having an exterior surface that is substantially planar (the use of a planar window or a plano-convex lens for lens 210 would have been obvious; both alternatives are well-known in the art) and faces the sample (202), said faceplate further including at least one aperture (the aperture in which lens 210 is placed) for transmitting the incident and reflected light between the optical system and the measurement position; a stage (201) arranged such that the sample surface is substantially parallel to the faceplate and configured such that multiple locations on the sample surface can be sequentially located at the measurement position (there is movement, see column 5, line 61-62), the separation between the faceplate and the sample being arranged such that during

measurement the volume bounded by the faceplate and the sample surface approximates a thin plate; and an apparatus (pump 212, fluid outlet 214) for maintaining a purge-gas flow (see claim 5 of the reference for gas) within said bounded volume, comprising: a source of purge-gas (pump 212); and means for introducing said purge-gas at an injection point within the bounded volume (the inlet) and arranged so that a purge gas flow travels past the measurement position (in front of lens 210) to improve the measurement.

The instrument of the reference is a reflectometer, see column 5, line 22, and that the reference could be an ellipsometer is at least suggested by the art in column 5, line 33, and the lens 210 is transmissive optics). As set forth above, windows are well-known in the art and the use of such to separate the system from the lens to protect the lens would have been obvious. Making the window of any known optical material that is resistant to scratching would have been obvious. It would have been obvious to select the gas so that it would not interfere with the measurement; it would have been foolish to do otherwise; selecting the particular gas and the pressure needed for the instrument to perform properly would have been obvious. Making the dimensions appropriate for the application at hand would have been obvious.

The reference teaches a processor to interpret the results (column 8, line 26). As shown in figure 3, the art shows having separate channels (hollow members) for the light paths to and from the sample.


3. Freeouf (US 6,414,302) was discussed in the instant specification (page 2, line 3). Hirose (US 6,151,116) shows a system which makes optical measurements through a purge gas, which can be nitrogen (column 5, line 49).

4. Papers related to this application may be submitted to Group 2800 by facsimile transmission. The faxing of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (15 November 1989). The fax number is (703) 872-9306

Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. A. Rosenberger whose telephone number is (703) 308-4804.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.

R. A. Rosenberger
5 December 2003



Richard A. Rosenberger
Primary Examiner